French Jesuits and the "Manchu Anatomy" – how China missed the Vesalian Revolution

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Shortly after the Boxer Uprising in China,* in 1901, a brief transaction took place between a Chinese coolie and a Danish antique collector named Peter Arnt Kierulf. The deal concerned a series of manuscripts, 90 sheets in all, written in the Manchu language and illustrated with anatomical figures (Fig. 1). Nobody knew who that coolie was, or how he came to possess those manuscripts.

When the pages were sent back to Copenhagen they came to the attention of Dr. Abraham Clod-Hansen, the Danish physician and pioneer in physical therapy who had a special interest in 17th-century anatomy texts. He soon identified the manuscripts as being the work of French Jesuit missionaries attending the Manchu court during the late 17th and early 18th centuries. The only other copy of this work known to exist outside of China was in the Museum of Natural History in Paris. Comparisons of the Copenhagen and Paris copies showed that they were identical, except that the Paris manuscripts were in a smaller format. Clod-Hansen presented his discovery to the Copenhagen Biological Society in 1906,[1] and the manuscripts, together with three handwritten volumes of his own research notes, were donated to the Oriental Collection of the Royal Library, which published a limited edition of facsimiles in 1927.[2]

The Jesuit mission in China, which began with the arrival of Matteo Ricci in Peking in 1601 and lasted until the end of the 18th century, represented a unique chapter in the history of east-west cultural intercourse. Besides being dedicated missionaries the Jesuits were also men of erudition, with special competence in such fields as astronomy, mathematics and physics. They impressed important Chinese officials with their scientific expertise, thus paving the way towards religious conversion. Willing to adopt the Chinese way of life, they spoke the language and wore the dress of their hosts. In 1611 they were entrusted with the reform of the calendar for the Chinese court.[3] Their favoured position was retained despite a change of regimes when the Manchu hordes from beyond the Great Wall overthrew the Ming Dynasty in 1644, establishing the Ch'ing Dynasty.†

Meanwhile, as France began to emerge as Europe's leading power under the ambitious designs of Louis XIV, French priests journeyed overseas to displace the Spaniards and Portuguese who formerly constituted the bulk of the missionary force. In 1687 the first contingent of French Jesuits — Joachim Bouvet (1656-1730), Louis LeComte (1655-1728), Claude de Visdelou (1656-1737), Jean de Fontaney (1643-1710) and Jean-Francois Gerbillon (1654-1707) — arrived in China, then under the reign of Kang Hsi (1662-1722). Of the five, Bouvet and Gerbillon elected to remain in Peking. They soon gained the confidence of the Emperor and became his tutors in such European learning as arithmetic, Euclid's elements, practical geometry and philosophy. According to de Fontaney:

> They wrote down their Demonstrations in the Tartar language ... The Fathers in question presented their Demonstrations, and explained them to the Emperor, who soon comprehending every Thing they taught him, admired our Sciences still more ...[4]

After pursuing his studies for some five years the Emperor was taken ill in 1692.‡ The moment had come for western medicine to shine. A vivid eyewitness account of the incident was given in one of de Fontaney's dispatches:[5]

> Matters were in this State when Father de Visdelou and I arrived at Court, bringing with us a Pound of the Peruvian Cortex ... We then went and offered it, declaring it to be the best specific in Europe against Agues. On the Morrow three Persons troubled with Agues took the Bark. The first took it

†The Manchus, a nomadic people from the northeastern region of China, ruled the Chinese from 1644 to 1911. Manchu is a Ural-Altaic rather than Sino-Tibetan language.

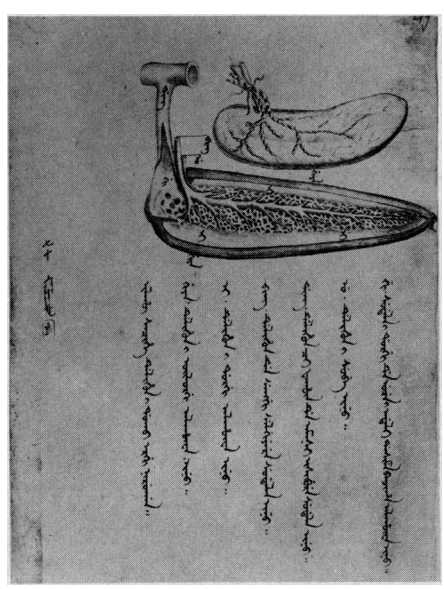

FIG. 1—Reproduction of page from facsimile edition of the "Manchu Anatomy" (courtesy of the Osler Library, McGill University).

*The Boxer Uprising (1900) was an attempt by Chinese nationalists to oust foreign interests, and resulted in the occupation and looting of Peking by the armies of six European nations, Japan and the United States.

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‡Kang Hsi's illness was probably malaria, and the "Peruvian Cortex" cinchona bark, from which quinine could be extracted. Cinchona was nicknamed "Jesuit bark" since Jesuit missionaries were the main importers and distributors of the drug in Europe.

after the Fit was over, the second on the Day that it seized him, and the third on the Day he was free from it... The three Patients being kept in the Palace, and watched by certain Persons appointed for that Purpose, were all cured with once taking the Cortex.

The Emperor, on learning this, was eager to take the new medication but was cautioned by his heir-apparent. Four noblemen were then asked to take the medicine, and all did so without ill effects.

> The Emperor, who had not been able to close his Eyes, sent for Prince Sosan about three in the Morning; when hearing that he and the rest of the Noblemen were well, he took the Cortex without any further Ceremony. He expected the Fit about three in the Afternoon, but missed it; and was quite easy the rest of the Day, and Night following... The Emperor continued to take the Cortex the following Days, and grew better daily.

The Jesuits, after such a successful, well-controlled clinical trial, were declared publicly to have saved the Emperor's life and were rewarded with a handsome mansion within the palace. Three of the Emperor's physicians, alas, were tried and banished for having offered the wrong advice!

Having personally sampled and benefited from western medicine, the Emperor became very interested in the foreigners' science. He ordered Father Bouvet to prepare for his instruction a treatise on anatomy. In his memoirs Bouvet indicated that he had included in his *traité fort ample* all the most useful discoveries of the century, with those of du Verney and other savants of the Royal Academy receiving special mention. The Emperor ordered the best of his painters to drop everything else in order to work on the illustrations. However, the progress of the work was interrupted when he became ill. Curious about his illness, Kang Hsi asked the Jesuit to explain to him "les raisons physiques, selon la méthode de nos médecins d'Europe". Within two or three months the erudite Bouvet managed to pour forth some 20 brief texts on different diseases. The insatiable Manchu monarch then further demanded his tutor to produce some sample remedies. The resourceful Frenchman erected a laboratory in the palace and for three months supervised the manufacture of conserves, syrups and essences of various kinds in accordance with the Pharmacopeia of Sieur Charas, then director of the Royal Laboratory in Paris. Kang Hsi was greatly delighted and kept all the products for his own use and also as gifts for his favourite princes and courtesans.[6]

The anatomy project was not resumed, for Bouvet soon departed for France. The task was later completed by another Jesuit, Dominique Parennin (1665-1741), who arrived in China in 1698.

Parennin was a man of diverse talents — linguistic, diplomatic and scientific — and was greatly respected in European intellectual circles for his contribution to sinological research. He was admired by no less a person than Voltaire, who said of him:

> The Jesuit Parennin, a man celebrated for his learning and the wisdom of his character, spoke Chinese and Tartar very well. He made himself necessary not only as interpreter but also as mathematician. It is he who is principally known among us for his wise and instructive answers to certain intellectual doubts of one of our best philosophers concerning the sciences of China.[7]

To serve as the blueprint for his assignment, Parennin chose the text of one of the standard works on anatomy in Europe at that time, written by Pierre Dionis,[8] which he considered to be the most exact and clear. However, for the illustrations he preferred the text of the Dane, Thomas Bartholin.¶ It was believed that Parennin himself did some actual dissection on executed Chinese criminals, but this could not be proved.[9] The Jesuits' assimilationist policy was clearly evident from the illustrations. Where appropriate, Chinese dress was added to the anatomical figures, which also bore the "typical" Oriental facial features.§

The project took five years, during which time the Emperor put at his disposal three mandarins, two scribes and two painters. When it was finished, however, the Emperor declined to authorize its publication, judging that it was not like any ordinary book to be left to the discretion of the ignorant. The right to read the manuscripts was granted to a privileged few who were not allowed to borrow them or take notes. Three handwritten copies were made, and these were stored in three different parts of the country — one inside Peking, another in the pleasure palace outside the capital, and the third in Jehol, the Manchus' ancestral home.[10]

A special copy was made and sent by Parennin to the Royal Academy of

¶A detailed analysis of the plates in comparison to Bartholin's original "Anatomia Renovata" (Leyden, 1673) was done by JOHNSSON JWS: L'anatomie mandchoue et les figures de Th. Bartholin, études d'iconographie comparée. *Kgl Dan Vidensk Selsk (Biol)* 7: 1, 1928.

§See, for example, plates 15 and 33 of the Copenhagen facsimile, which showed a coronal section of the brain and the extraocular muscles. It is also interesting that in plate 1, depicting the frontal view of a man's musculature, the genitals were conveniently draped. Whether this was a standard missionary practice or merely a concession to the Chinese moral code only Parennin knew for sure.

Sciences in Paris, of which he was a corresponding member. In a letter dated May 1, 1723 accompanying the "Manchu Anatomy" he wrote:

> Vous serez peut-être surpris que je vous envoye de si loin un traité d'Anatomie, un corps de Médecine, et des questions de Physiques écrites en une langue, qui, sans doute, vous est inconnue; mais votre surprise cessera quand vous verrez que ce sont vos propres ouvrages que je vous envoye habillés à la Tartare. Oui, Messieurs, ce sont vos pensées et vos ingénieuses découvertes . . .[11]

For more than a century and a half the Paris copy was the only copy known to exist in Europe. After Kierulf's discovery it remained to be seen whether any copies were left in China. According to Pfister, a Jesuit scholar in the 19th century, there was one in the possession of Dr. John Dudgeon, a British medical missionary, and another in the Russian Legation in Peking.[12] The introduction to the Copenhagen facsimile edition states that a search of the Imperial Library in St. Petersburg failed to yield another copy rumoured to be there. No anatomical work was listed in the catalogue of Manchu books in the former Palace Library in Peking, published in 1933.[13] Thus the Paris and Copenhagen manuscripts could be the only remaining evidence of Parennin's labours.

It was indeed sad that Kang Hsi, who distinguished himself by his unusual intelligence and was noted for his encouragement of the arts and sciences, failed to perceive the importance of the "Manchu Anatomy". Had it been printed and disseminated it certainly would have revolutionized Chinese medicine, as Vesalius' "Fabrica" (1543) did for European medicine. In comparison with other areas of medicine in China, anatomy had progressed poorly.[14] The Jesuits themselves were quite aware of the Chinese deficiencies in this respect, as is evident from the following remark by LeComte, one of the original five French Jesuits:

> Neither are they altogether ignorant in anatomy; nay, they grant a circulation of the blood and humours; but all their notions are so general, confused, and most an end so false, that I am afraid in this place to particularize them.[15]

Another Jesuit had earlier attempted the introduction of western anatomical ideas. Jean Terenz, or Terrentius (original name Schreck, 1576-1630), a noted physician, philosopher and mathematician in Germany before entering the order, composed a small, two-volume text in Chinese entitled "Jen Chen Cho Kai" (Explanation of the Human Body)[16] when he was in China from 1621 to 1630. However, this also did not have much of an impact.

In reviewing the medical activities of the Jesuits in China, the historians Wong and Wu[17] lamented that they left few permanent traces. Either the superiors of the order did not realize the importance of medical work, or else they had a strong foothold in Peking already through their mathematical and astronomical skills and hence paid insufficient heed to medicine. It was not until the 19th century that the potential of medicine as an instrument of evangelism was fully exploited by the Protestant missionaries.[18] Chinese medicine, having missed the opportunity provided by the "Manchu Anatomy", thus had to wait a further century and more for the reintroduction of scientific ideas.

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References

1. Sitzungsberichte der Biologischen Gesellschaft in Kopenhagen, 1905-6. *Skand Arch Physiol (Leipzig)* 18: 321, 1906
2. *Anatomie Mandchoue, Facsimile du Manuscrits No II du Fonds Oriental de la Bibliothèque Royale de Copenhague.* Copenhagen, 1927
3. NEEDHAM J: *Chinese Astronomy and the Jesuit Mission: an Encounter of Cultures.* London, China Society, 1958
4. DE FONTANEY J: in *Travels of the Jesuits into Various Parts of the World, Particularly China and the East-Indies,* vol II, second ed. London, Piety, 1762, p 96
5. *Ibid,* p 115
6. BOUVET J: *Portrait Historique de l'Empereur de la Chine Présenté au Roy.* Paris, Michallet, 1698, pp 150-157
7. ROWBOTHAM AH: *Missionary and Mandarin: the Jesuits at the Court of China.* Berkeley, University of California Pr, 1942, p 181 (taken from Voltaire's *Siècle de Louis XIV,* chap 39)
8. DIONIS P: *L'Anatomie de l'Homme, Suivant la Circulation du Sang et les Dernières Découvertes, Démontrée au Jardin Royal.* Paris, 1690
9. HUARD P: La diffusion de l'anatomie européenne dans quelques secteurs de l'Asie. *Arch Int Hist Sci* 32: 266, 1953
10. PARENNIN P: in *Lettres Edifiantes et Curieuses, Ecrites par des Missionnaires de la Compagnie de Jésus,* vol XIX. Paris, Merigot, 1780-83, pp 257-299
11. *Ibid,* p 257
12. PFISTER L: *Notices Biographiques et Bibliographiques sur les Jésuites de l'Ancienne Mission de Chine, 1552-1773,* vol I. Shanghai, Mission Catholique, 1932, p 513
13. LI TC (ed): *Union Catalogue of Manchu Books in the National Library of Peiping and the Library of the Palace Museum.* Peking, 1933
14. HSIEH ET: A review of ancient Chinese anatomy. *Anat Rec* 20: 97, 1920-21
15. LECOMTE L: *Memoirs and Remarks Made in Above Ten Years Travels Through the Empire of China.* London, Payne, 1738, p 213
16. GABRIELLA G: Giovanni Schreck, linceo, gesuita e missionario in Cina e le sue lettere dall'Asia. *R Accad Naz Lincei Rend Cl Sci Morali Stor Filol* 6: 462, 1936
17. WONG KC, WU LT: *History of Chinese Medicine.* Tientsin, Tientsin Pr, 1932, p 136
18. YOUNG TKH: The William Osler Medal essay: A conflict of professions: the medical missionary in China, 1835-1890. *Bull Hist Med* 47: 250, 1973